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MODIFIED AMINOPLAST CROSSLINKERS AND POWDER COATING COMPOSITIONS CONTAINING SUCH CROSSLINKERS

ABSTRACT

A crosslinking agent is provided, prepared by reacting (A) an aminoplast resin; (B) a reactive urethane group-containing adduct and (C) at least one other compound having active hydrogen groups reactive with aminoplast resin (A). Compound (C) is selected from:

(i) compounds having the structure (I):

$$X \xrightarrow{R^3} R^2$$

(1)

wherein X is aromatic; R^1 , R^2 , and R^3 each independently represents H, (cyclo)alkyl having from 1 to 12 carbon atoms, aryl, alkaryl, aralkyl, or an active hydrogen-containing group,

(ii) compounds having the structure (II) or (III):

where R' and R" each independently represents an aromatic group or an alkyl group having 1 to 12 carbon atoms; and

(iii) compounds different from (i) and (ii), having a melting point of at least 80°C.

Further provided are methods for preparing the crosslinking agent curable compositions containing the crosslinking agent, and coated substrates